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ALBERT VON HALLER

AND

THE DISPUTATIONES CHIRURGICAE SELECTAE

by

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Sir D'ARCY POWER, K.B.E., F.R.C.S. Eng.

I have chosen to speak to you to-day about Haller and his collection of surgical Theses for two reasons. Haller was Swiss by birth, education and inclination and it is fitting, therefore, that he should be commemorated when we are meeting in his native country. He held, long and worthily, a professorship given to him by George II who was both King of England and Elector of Hanover. I am an Englishman and my great-grandfather and my grand-father held commissions in the King's German Legion given to them by George III, also an Elector of Hanover. It seemed right, therefore, that I should praise Haller on this occasion, but his range of knowledge was so vast that I have restricted myself to his collection of Surgical Theses because, as I have been a surgeon, I felt more at home in reading them than in the consideration of his poems, his physiology, or his botany.

Haller was indeed possessed of Encyclopaedic knowledge. He was a natural historian, a botanist, a physician, somewhat of a surgeon, a poet, a writer on religion, a bibliographer as well as a great and original physiologist. A pupil of Boerhaave and of Morgagni, he learnt from his masters to exercise those qualities of head and heart which made both men great teachers beloved by their pupils. Neither of Boerhaave nor of Haller do we hear a single word of dispraise. Both lived blameless lives; both did much to advance medicine, the one on the clinical, the other on the scientific side, but the pupil was perhaps somewhat greater than the master. He had a more encyclopaedic knowledge and being less hampered by the practice of his profession, he was the better able to use it for the advancement of science.

Life History.

Haller (Fig. 1) came of a good stock, intellectually as well as socially. His father, an advocate, was Chancellor of Baden in Aargau, his mother was a daughter of one the members of the sovereign council of Berne. He was born at Berne, on October 8th, 1708, the fifth and youngest son of Nicholas de Haller. Precocious beyond other children it is said that at the age of four he preached to his father's servants upon texts from scripture; at nine he had compiled a Chaldee grammar, a Hebrew and Latin dictionary and an historical Lexicon containing nearly two thousand articles mostly taken from Moreri and Bayle.

He was educated at the High School at Berne where he showed himself sufficiently a prig to write in Greek instead of in Latin the essay required before removal from the lower into the upper school. His father, recognising the danger took him away from school and placed him under a severe and narrow-minded tutor upon whom the boy revenged himself by writing lampoons. At the age of fifteen he had written tragedies, comedies, an epic of

4000 verses in the manner of Vergil and some translations from Ovid and Horace. For a time he treasured these productions and once risked his life to save them from a house which was on fire but a few years afterwards he burnt them with his own hand.

Destined at first for the Ministry, he decided after the death of his father, in 1721, to study medicine. He worked for a time at Tübingen under Elias Camerarius (1673–1724), the professor of medicine, and Johann Duvernoi (1691–1759). Here he made such progress that he published in 1725, conjointly with Duvernoi, a paper entitled " Ductum salivalem novum per glandulas maxillares, sublinguales, linguamque excurrentem ", etc., to show that the duct which had been described at Halle by G. D. Coschwitz (1679–1729) in the previous year was non-existent and that what seemed to be a salivary duct was really a blood vessel. Haller used the same subject two years later as his thesis for the M.D. at the University of Leyden, under the title " Experimenta et dubia circa ductum salivalem novum Coschwizianum." The thesis was printed at Leyden by C. Wishoff in 1727.

He appears to have suffered from some illness—perhaps tuberculous—which obliged him to leave Tübingen and travel in southern Germany between the years 1725 and 1727 and it was at this time that he began to study botany. He returned to Leyden on his recovery seemingly because the life at Tübingen was uncongenial; at Leyden he made the acquaintance of Albinus and Ruysch and came under the influence of Boerhaave.

He visited England as soon as he had obtained his degree carrying with him such letters of introduction as made him acquainted with Sir Hans Sloane, Cheselden, Pringle, Douglas, and other distinguished men of science in London. His intimacy with James and John Douglas ,the leading teachers of anatomy, prove that Haller was chiefly interested in the study of anatomy and this is confirmed by the story that on leaving London he went to Paris where he became involved in some " resurrecting " scandal which obliged him to take refuge at Basel. He went afterwards to Zurich where he renewed his acquaintance with Johann Gesner (1709–1790), the botanist who remained his life-long friend and correspondent. Professor Henry E. Sigerist has recently published no less than 549 letters written by Haller to Gesner during the years 1726–1777 (*Abhandlungen der König. Gesellschaft der Wissenschaft zu Göttingen, Math.-Physik. Klasse.* N.F. Bd. xi, 2. Berlin, Weidmannsche Buchhandlung, 1923). At Zurich, Haller attended the course in higher mathematics given by Jean Bernouilli and began to study the field botany of Switzerland, a subject in which he soon became the acknowledged authority.

He returned to Berne in 1729, being then in his twenty-second year, and published " Versuch Schweizerischer Gedichte ", a book of poems on the subject of the Alps. The book, which was at first published anonymously, met with a wonderful success and he became the father of a new school of German poetry. The poems ran through 22 editions and were translated into French, Italian and Latin. Prince Radzivil, the Commander of the Polish Confederate Army, is said, to have been so pleased with them that he sent Haller—the most unwarlike of men—a commission as Major-General.

Haller continued to study anatomy, physiology and botany at Berne, from 1730 to 1734, and during these years he climbed the highest peaks in the Jura and the Alps, visited the marshes and explored the vineyards to add to his knowledge of the Swiss Flora (Fig. 3). In 1834 the republic of Berne built an amphitheatre and allowed Haller to lecture in it upon anatomy but without any stipend. He also applied for the office of City Physician but only polled thirty-seven votes as against 42 cast for the other candidate whom he describes as " compotator insignis ". In May 1735 he was unanimously appointed

public Librarian. His reputation for learning had become so well established that in 1736 King George II, as Elector of Hanover, appointed him Professor of Anatomy, Surgery and Botany at the University of Göttingen. He accepted the offer and soon proved himself a good and kindly teacher devoting himself more especially to the physiological, anatomical and botanical side of his duties to the neglect of surgery, indeed, it is said that he never could bring himself to perfor an operation on a man although he carried out many experiments on living animals.

He laboured unremittingly for seventeen years at Göttingen, establishing an anatomical theatre which was in reality the first physiological institute in Germany, a lying-in hospital, a scientific society and a school of design. He superintended, too, the building of a reformed church for the use of the professors and students of the University. For these services as well as for his acknowledged position in science the Emperor Joseph created him a Baron of the Empire in 1752, and, although he declined the honour as inappropriate for a citizen of a republic, he is generally known in history as Baron von Haller.

He received many offers of preferment whilst he held office at Göttingen, from the King of Prussia to go to Berlin, from the States of Holland, from the University of Oxford to fill the post of Sherardian Professor of Botany in succession to John James Dillenius. He declined them all on the plea of ill-health and the wish to return to his native country. The opportunity to do so came in 1745 when he was elected a member of the sovereign Council of Berne, though he did not leave Göttingen until 1753 when he was elected Ammann, (which carried with it the post of Salt inspector and Scrutineer or " Teller "), by ballot out of 34 candidates, and in the following year he was appointed Assessor to the Committee of Education. In 1758 he moved to Roche near Berne where he lived until 1764 studying botany, writing his great " First Lines of Physiology " somewhat tormented by the gout and growing fat for want of exercise.

The rest of his life was spent in peaceful public duties. He brought to perfection the administration of the saltworks which led to a sensible increase in the revenue of the republic. He interested himself in a scheme to fit the children of the wealthier citizens for the higher civic offices. He served as President of the Society of Economics. He helped to improve the condition of the Clergy in the Pays de Vaud and he made a determined stand against quacks. Although he thus lived in comparative retirement he was not forgotten by the scientific world. He was appointed perpetual President of the Academy of Göttingen. He was urgently solicited to accept the Chancellorship of the University of Halle and to accept an appointment at St. Petersburg. He declined them all and was contented to live at Berne in comparative poverty where his fellow citizens showed their regard for him by the grant of a pension of 400 imperial crowns in 1769 and, in 1772, by a present of 72 ounces of silver plate. The Academy of Sciences at Paris elected him an honorary Associate and the Royal Society in England made him a Fellow; finally, Gustavus III created him a Knight of the Polar Star in 1776, the year before his death.

Haller married three times; Mariana, his first wife, dying of typhoid fever soon after his arrival in Göttingen, and he left four sons and three daughters. Giving up all work in 1773, he died on December 12th, 1777, I think, of tuberculous disease of the bladder and prostate. In 1766 he suffered from an ischio-rectal abscess which was allowed to burst but it was not until 1771 that he began to suffer from cystitis of which he had repeated but intermittent attacks during the rest of his life. The pain was so great

that he accustomed himself to take large and increasing doses of opium which disturbed his digestion, led to great constipation and utterly unfitted him to carry on his work. In 1773 he says that his urine had been turbid for the past three years but it was not until the end of this year that, at the entreaty of his friends in England, he used an enema containing opium which gave him as much relief as the medicine he had been accustomed to swallow.

A Scotch student writing to Cullen in 1752 says of him: "The Professor seems to be a worthy and agreeable gentleman who is so immersed in study that he has no time to spare for company. He literally lives in his library. He not only works himself but he makes his wife, his children, his pupils and his friends intellectual hewers of wood and drawers of water in his service."

It is somewhat remarkable, considering his blameless life and character, that the pen-portrait of Haller should have been drawn by so shameless a blackguard as Jacques Casanova who spent three days in his company at Roche in the spring of 1750 when Haller was 52 and his guest was 35. Casanova says of him in his Memoirs (chapter 14): "Mr. Haller was six feet in height, broad in proportion and a fine figure of a man. He was in fact a kind of physical and mental prodigy... He told me that he looked upon Morgagni as his master and showed me many of his letters. Haller was a good pindaric poet and a savant of the highest class. He was wholly without ostentation either in his home or when he was amongst those who knew nothing of science. No one knew better than he how to accommodate himself to his company for he was friendly with everyone and never gave offence. If I were asked how he was able to please everybody I should find it hard to give an answer because it is easier to tell of the qualities he had than to speak of those which were wanting. He had no pride and there was an entire absence of self-seeking or of any air of superiority. He had in fact none of the faults which are usually and with justice attributed to the learned and witty. He never boasted of his own works, and if they were mentioned he turned the conversation as soon as he could do so conveniently. He kept a good and abundant but plain table and only drank water with his meals although he allowed himself a small glass of liqueur at dessert which he drowned in a large glass of water. His wife—for he had married a second time—was still young and bore the imprint of good nature and discretion upon her fine features. There was also a charming daughter of eighteen of modest demeanour, who only opened her mouth occasionally to speak in a low tone to a young man—her tutor—who sat beside her." This portrait of the great physiological is well drawn by Casanova but it would have been of the very greatest interest to have had a similar portrait of Casanova from the pen of Haller. The two men could have had nothing in common but a love of books. In everything else they differed *toto coelo*

Sir Michael Foster says of him (Lectures on the History of Physiology, p. 206): "Of the highest importance were his researches on the mechanics of respiration, on the formation of bone and on the development of the embryo; the latter indeed stands out as the most conspicuous piece of work on this subject between Malpighi and Von Baer, though marred by the theoretical speculations attached to it. Of what is perhaps his greatest work the establishment of the doctrine of muscular irritability, I shall have to speak in detail. For the present I wish to speak of him as an expositor only. When we turn from any of the preceding writers on physiology and open the pages of Haller's *Elementa* we feel we have passed into modern times. Save for the strangeness of much of the nomenclature and for small deficiencies in all that relates to the chemical changes of the body, we seem to be reading a modern textbook of the most laborious and exhaustive kind. Haller passes in review all the

phenomena of the body. In dealing with each division of physiology he carefully describes the anatomical basis, including the data of minute structure, physical properties and chemical composition so far as was then known. He then states the observations which have been made and in respect of each question as it arises, explains the several views which have been put forward, giving minute and full references to all the authors quoted. And he finally delivers a reasoned critical judgment, expounding the conclusion which may be arrived at, but not omitting to state plainly, when necessary, the limitations which the lack of adequate evidence places on forming a decided judgment. He carefully recounts and as carefully criticises all the knowledge which can be gleaned about any question. If he feels unable to come to a decided conclusion he candidly says so. He always strives to be as exact and as clear as possible; conspicuous is the absence from his wirtings of loose expressions and ill-defined general views such as abound in so many of his predecessors. We may take any part of his great work as a trustworthy account of the knowledge of the time with regard to the questions therein treated."

I am more concerned today with Haller as an expositor than as a physiologist, a botanist or a poet. Then, as now, candidates for the M. D. degree at a University were required to present a thesis which had to be defended in public in the presence of the Professor and of such members of the University as chose to attend. The subject of the thesis was inspired by the Professor but the argument was worked out by the candidate. Then, as now, the more worthy essays were printed but they were mere ephemeridæ and would have been lost to posterity if Haller had not preserved those which he considered to be the best either, as he says, on account of the full and accurate description of disease, of new instruments invented or of unusual precautions adopted. The collection was published in five volumes under the title "Disputationes Chirurgicæ Selectæ", substantial quartos of five or six hundred pages each. [Volumes 1 and 2 were published at Amsterdam "sumptibus Jacobea Wetstein ", vols 3, 4 and 5 at Lausanne " sumptibus Marci-Michael Bousquet et Socior ". The first volume has an allegorical frontispiece (Fig. 2), representing a disputation in the schools, designed by Chr. Eisen and engraved by P. F. Tardieu at the cost of "Marci Michælis Bousquet et socior".] This frontispiece only appears in the first volume, the others have a title page with a medallion portrait of Haller from a painting by D. Pelon engraved by L. Joubert ["orn et sculp. Lugd."]. The whole work is dedicated by the publisher to the President, Director and Fellows of the Royal Academy of Surgeons at Paris. The preface to the first volume is dated from Berne 20th January 1755 and the whole five volumes were completed by 1756.

Vol. 1 deals with the surgery of the Head and Eye. Vol. 2 with the Eye, Mouth, Gullet, tracheotomy, wryneck, mammary cancer and the surgery of the Chest. Vol. 3 with Hernia and Obstetrics. Vol. 4 with Stone, Lithotomy and the diseases of Joints. Vol. 5 contains theses on Wounds of the Abdomen and of the Bloodvessels as well as upon Disease of the Hip. The preface to this volume is dated from Berne on June 10th 1756 and Haller repeats the statement that his object in making the collection was to illustrate a single disease, fatal cases where a post mortem had been made or where some trusty remedy had cured the patient.

The theses range in date from 1666 to 1752 and they are valuable as showing the subjects which interested surgeons during this period. Incidentally they contain many curious details of contemporary methods, customs and practice, by their references to long forgotten authorities they afford evidence of the interchange of knowledge which took place amongst the European surgeons of the time.

The theses appear to be planned upon a form common to every University and for the most part have retained a certain theological flavour. They usually begin with an invocation to God or a dedication to the Professor. The subject of the thesis is then stated briefly with an etymology of the surgical terms used, introducing when possible some indication that the candidate knew a little Greek even if it were no more than the Greek characters. The description of a case is then given, the patient having been most frequently in the Clinic of the Professor and under the personal care of the writer. The causes of the condition, climatic, constitutional, dietetic or traumatic are then indicated and the symptoms, diagnosis and treatment (*a*) by bleeding, (*b*) by diet and (*c*) by operation are successively discussed.

The first volume contains amongst other theses an excellent account of what is now called "Sinusitis". It was presented by Ludolph Henry Runge of Bremen on 10th December 1750. He considers the various injuries and inflammations to which the frontal and maxillary sinuses are liable speaking of the inflammatory, cystic, carcinomatous, bony and fleshy tumours which grow in connection with them. He states that ozaena is due to ulceration and should be operated upon and he treats suppuration of the antrum by drainage after removal of a tooth.

Volume two contains an essay upon "Struma of the œsophagus" by Philip Henry Beuttell, who was graduating from Tübingen, on 29th May 1742. By struma Bluttell means Cancer of the œsophagus. He treats the disease in an early stage by the introduction of a probang of whalebone to the end of which a well oiled piece of sponge is attached and in the later stages by a tube reaching as far as the stomach. It is then possible, he says, to feed the patient with broth, wine, bread and milk, poached eggs and other soft foods. He also suggests the use of nutrient enemata. The invention of the œsophageal probang and tube he attributes to Fabricius Hildanus (1560-1624).

Volume iii has a good essay on Hernia by C. F. Boutigni Desperaux dated from Paris 6th February 1742. It is a plea for early operation in cases of non-strangulated hernia.

The thesis presented by H. Lavater at Basel on the 18th September 1672, is a type of essay which soon became extinct. It begins with an invocation in Greek followed by an introduction in which he manages to drag in various Greek words and French phrases. The etymology of Enteroperistolé, the name he gives to Intestinal Obstruction, carries him over four quarto pages. He then quotes a case which had come under his own observation in the hospital at Lyons in 1669 [and states that he had been told about it by "clarissimo atque doctissimo viro Domini Carlo Sponio, medicorum Lugdunensium Gallorum vice-Decano, dignissimo, experientissimo, felicissimo preceptore hospiteque meo in æternum mihi honorando]. The condition is then discussed under twenty-five headings until at the twenty-sixth he arrives at the treatment by diet, drugs and venesection. The surgical treatment recommended is to manipulate the abdomen whilst the patient is practically standing on his head. An operation may be undertaken if this fails in cases of umbilical and inguinal hernia. When the abdomen has been opened and the bowel is found to be congested it can be washed in spirits of wine before it is put back, care being taken to replace it in the abdomen and to see that it is not pushed in between the aponeurosis of the external oblique muscle and the ring of the internal oblique. The wound is then to be sewn up with waxed thread and cleansed with red wine or some other warm fluid. Continuous hiccough after the operation is a bad sign especially if it be associated with vomiting and fever.

Christian Wencker in 1743 gave an account of a ruptured gastric ulcer. He stated that an abscess was formed which burst with a loud report whilst

Fig. 1.

Baron von Haller.

Fig. 2.

A surgical Disputation
in the Schools.

Fig. 3.

Baron von Haller and his Wife botanising
in the Swiss Alps

the patient—a woman—was at work in the harvest field in 1716. Blood, food and pieces of dead rib were evacuated. Recovery took place with the formation of a fistula through which the interior of the stomach could be explored by means of a lighted candle. The patient died of dysentery twenty-seven years afterwards. The case would have seemed incredible but for the well authenticated instance of Alexis St. Martin who proved so useful to physiologists.

Francis Thierry read a thesis at Paris on February 5th 1750 in which he asked whether there were no better methods of treating aneurysms surgically than those in common use—the methods of Antyllus and Anel ? He had experimented with dogs and arrived at the conclusions that no harm was done if the nerve was isolated and the artery alone was ligatured. The thesis is of especial interest because it and the thesis by Lavater in 1672 on acutely strangulated hernia alone show any evidence of original experimental work. Both had operated on dogs. Thierry's thesis is also interesting because it appeared at the beginning of the period when the surgery of the blood vessels was attracting attention throughout Europe, a period marked by John Hunter's operation of ligature of the femoral in its continuity at a distance from the aneurysm.

Dr. Grübeling of Helmstadt, wrote a thesis in 1699 on Catheters and their uses. He gives an account of their history and makes it appear that they were not often employed. At the time he wrote they were straight tubes with a terminal eye and were either rigid or flexible. The flexible catheters being made of leather or eelskin. This thesis may usefully be compared with the anonymous tract on "The exact cure if the Caruncle" which John Read published in 1588.

Some of the theses give interesting details about the manners and customs of the time at which they were written. Thus Philip Sigismund Palm of Tübingen, tells on March 20th, 1743, of a patient with a strangulated hernia who recovered after exfoliation of a piece of gangrenous bowel. He was Thomas Gipsel, a thin man aged 54, who had suffered for some time from a right inguinal hernia which he had always been able to replace easily. He had worn a truss but sometimes forgot to put it on. One winter's day in 1725 he went to a "solemn" boar hunt which lasted several days and nights in very cold weather. The hernia came down and he could not replace it nor could it be put back by the doctors who were taking part in the hunt. He was obliged therefore to lie in a cold hut for three days unrelieved by any of the small domestic remedies which were obtainable. He was seen on the third day by Dr. Jæger and Surgeon Reppelman who first administered stimulating and afterwards soothing enemata with discutient poultices and they bled him but all in vain. On the fifth day the sworn town surgeon Werner and the chief military surgeon Reifer saw him. They too tried various remedies and Dom. Werner advised an operation which was declined by the patient, his wife and his children who all said that they would rather he died than underwent an operation. Surgeon Simon was then summoned from Stuttgard who told them that it was now too late to operate and the patient was therefore left in the care of his usual physician and surgeon. Surgeon Werner saw him again on the tenth day and found him apparently moribund. The friends now agreed to an operation but Werner warned them that there was but little hope, that it could only be carried out as a last resource and that he must not be blamed if the patient died under the operation or shortly afterwards. He was confessed, given some strengthening food and the swelling was incised. The bowel was found to be gangrenous. It was tied off and two and a half feet of dead ileum were cut away. The condition of the patient improved rapidly

and the wound healed until there was only a sinus. The sinus closed in process of time and the patient suffered from an attack of intestinal obstruction which Surgeon Werner overcame by rectal enemata. The patient lived twenty-two years after the strangulation and died of senile decay having always passed his motions per anum. A post mortem examination showed that, in modern language, the ileum was "short circuited".

In another case the chief doctor at Strasburg made a long round of visits on a hot morning in the year 1712, or as the candidate puts it "Sirio tunc temporis maxime ardente". He got overheated, drank a great draft of the very coldest beer which gave him a bad stomachache and caused him to vomit so severely that a femoral hernia appeared. He was advised to have an operation but he declined until the eleventh day when it was performed and he died.

John William Widman presented a thesis at Helmstadt on 22nd December 1744 treating of the structure and disease of the Knee-joint. He states that his Master, Laurence Heister, in 1707 saw several soldiers in the British hospitals who had been wounded in 1704 at the battles near Schellenberg and Hochstadt in the Marlborough campaigns. They had suffered much pain, were languid, weak, pale and still confined to bed. Their wounds poured pus and the bones were carious. The surgeon in charge had repeatedly advised amputation as a last resource but had always failed to obtain the consent of the patients. At last in the spring of the year they asked to have an amputation through the thigh "as Mr. Amyand used to do it, who is now chief surgeon to the King of Great Britain". Their wish was complied with but they all died except one There were other soldiers who had been wounded in the knee in Belgium during the battles and sieges of 1708 and 1709, but they had died of gangrene or their legs had been amputated.

This reference is interesting in connection with Claudius Amyand as it was not known that he had served in Marlborough's campaigns. He may have owed his appointment to his knowledge of French for he was the son of a French Hugenot refugee. He assisted in establishing St. George's Hospital in 1721 and it is then expressly stated that his special knowledge of the constitution and governance of foreign hospitals was requisitioned by the promoters to draft the first by-laws. He was one of the six lessees of Lanesborough House on the site of which the hospital still stands. (The History of St. George's Hospital by G. C. Peachey 1914, p. 288.)

Similarly J. R. Tieffenbach presented a thesis at Wittenberg in December 1720 describing the case of a marine, aged about 34, who received a bayonet wound in the left hypochondriac region during the battle of Ramillies in 1706. He was kept on slops until, unknown to the surgeon, he got some bread from a comrade and was so much strengthened by it that he was afterwards allowed solid food. He recovered with a left sided inguinal colostomy and was alive and well fourteen years afterwards.

There is a graphic account of a passionate Englishman who ruptured his tendo Achillis and died of the effects. His name was Rudolph Richardson a Master Ship builder aged 56, robust and rather stout who had bever previously suffered from any illness. He brought a ship from England to Gedan on 13th May 1726 and misjudging the distance in jumping ashore from a boat he fell backwards into the water and ruptured his tendo Achillis but without any external wound. He walked about six hundred paces with the help of his men although his foot swelled rapidly.

Adam Breslau the surgeon was summoned, diagnosed the nature of the injury and advised rest. In spite of this the patient insisted upon walking with a stick and spending night after night with his friends drinking large quantities of wine and beer. He was seized with a fever on the eighteenth

day; there was much local inflammation and a gelatinous fluid escaped from the tendon sheath at the seat of injury. The foot was amputated on October 8th and the splints were removed on the third day when the stump looked healthy. The patient fell into frightful rages and was so intemperate that he again became feverish and died of gangrene on the eleventh day after the amputation.

There are two purely topical theses. The first by George Ludovic Jetske in 1739 dealing with the Lithontryptic of Madame Stevens for the secret of which the English Government had paid £5000 which he estimates at 35,000 Dutch florins. He gives the formula for the powder, decoction and pills and describes her method of using them. It will be remembered that Horace Walpole writing to Horace Mann on January 14th 1745 says "My father has been extremely ill this week with his disorder; I think the physicians are more and more persuaded that it is the stone in his bladder. He is taking a preparation of Mrs. Stephen's medicine, a receipt of one Dr. Jurin, which we began to fear was too violent for him; I made his doctor angry with me by arguing on this medicine which I never could comprehend. It is of so great violence, that it is to split a stone when it arrives at it, and yet it is to do no damage at all to the tender intestines through which it must first pass. I told him it was like an admiral going on a secret expedition of war with instructions which are not to be opened till he arrives in such a latitude." The remedy proved too strong. Lord Orford died three months later and an acrimonious controversy took place between Dr. Jurin and John Ranby the surgeon.

The second essay dealing with local topics is an Eloge on the Chevalier Taylor delivered at Tübingen on May 1st 1750 by Burc. David Mauchart who had a shrewd suspicion that the Chevalier was a quack—as indeed he was—but he expresses himself in very guarded terms although Haller as early as 4th December 1734 was writing to Gesner from Berne that "Taylor has left here in bad odour" and all his operations have been failures.

The gem of the collection from an historical point of view is undoubtedly the thesis presented by Charles David Brecht in 1743 dealing with the blindness of Tobit. It is based on the work of Thomas Bartholin "De morbis biblicis". The subject is introduced with a consideration of the age of the Book of Tobit and the whole essay is delightful reading after the style of Sir Thomas Browne's "Vulgar Errors". Dr. Brecht discusses gravely as to the way in which birds' dung could have dropped into the eyes of Tobit whilst he slept, arguing that he must at any rate have slept with his eyes open and upon his back whilst the birds were probably roosting on the beams of the house just above him. He then enquires what species of bird it was. Whether a sparrow, a swallow, or a pigeon and how pigeons' dung could produce leucomata ? Then comes the difficult question as to the way in which the gall of a fish cured them, whether by causing them to peel off by exfoliation or by insensible dissipation ? What kind of fish it was from which Tobit obtained the gall whether it was a callionychus, a hippopotamus, a porpoise, a lamia or some other kind. It was certainly not a fundulus nor a carp. The exact method of applying the gall is then discussed for it is doubtful, he thinks, whether it was dropped into the eyes, sprinkled upon them or rubbed in.

And thus we take leave of the Disputationes Chirurgicæ feeling assured that if Haller preserved a few grains of value the bulk is chaff.

SERPENTARIA